Status of **KOPIO GEANT** Monte Carlo

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- Developments since 18 Nov 2002

- Status of detector elements

- To do list

- Responsibilities

- Outlook

Developments since 18 Nov 2002

- David took over MC management.

- Mike Sivertz moved many parameters describing geometry from hard-coded numbers to FFREAD cards (read at execution time).

- Multiple K_L^0 per event implemented.

- Ilektra traveled to TRIUMF and has been working with Peter to implement a PR/CAL/beam pipe in GEANT that is more amenable to hit digitization and event display.

- Carol, Marvin and Mike S. have demonstrated reasonable consistency of FastMC and GEANT MC for event generation and geometry. This is essential for trigger development. Discrepancies are understood.

- We have bi-weekly VRVS meetings Fridays 11:30-13:30 BNL time, minutes posted to kopio.mc newsgroup.

Status of detector elements

Element	18Nov02	28Feb03	ETOC
US coll./beam	NO	Improved	After PR/CAL/OV
US veto	YES	NC	NA
Barrel veto	YES	NC	NA
VT	YES	NC	NA
VT CV	YES	NC	NA
PR	YES	Improving	7Mar03
CAL	YES	Improving	7Mar03
OV	NO	After PR/CAL	14Mar03?
DS pipe CV	YES	NC	NA
Inner PR liner	NO	In progress	1Apr03?
Far DS PV	YES	Improving	14Mar03?
Catcher	NO	soon?	?

DEFINITIONS:

VT $\equiv$ Vacuum Tank

OV $\equiv$ Outer Veto around PR

ETOC $\equiv$ Estimated Time Of Completion

NC $\equiv$ No Change

NA $\equiv$ Not Applicable

KOPIO GEANT MC to do

1. Event display : should be available after PR/CAL

2. Neutrons : both low and high energy

3. Realistic K_L^0 spectrum : angular dependence across aperture

4. Merge FastMC/GEANT

5. Hits ntuple

6. Hits digitization (DAQ?)

Outside the scope of MC group: Offline analysis (Reconstruction program)

Item	Responsible
US coll./beam	Ilektra
US veto	Marvin
Barrel veto	Marvin
Vacuum tank	Marvin
Vacuum tank CV	Marvin
PR	Peter,Ilektra
CAL	Peter,Ilektra
OV	Peter,Ilektra
DS pipe CV	Marvin
Inner PR liner	Nello
Far DS PV	Carol
Catcher	Tadashi?
Neutrons	Mike S.
K_L^0 decays	David
Management	David
Merge with FastMC	Ermanno
Ntuples	David
Event display	Ilektra
Hit Digitization	MANY
Trigger	MANY

Outlook

All detector elements should be installed and functional in GEANT MC by 1 May 2003. This should enable further detector design work, trigger development and development of offline analysis.

KOPIO GEANT MC page:

`http://www.phy.bnl.gov/∼djaffe/KOPIO/GEANTMC/`